



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,427	03/10/2006	Kyoichi Abe	07057.0117-00000	3462

22852 7590 11/02/2007  
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
LLP  
901 NEW YORK AVENUE, NW  
WASHINGTON, DC 20001-4413

EXAMINER

BRAINARD, TIMOTHY A

ART UNIT	PAPER NUMBER
----------	--------------

3662

MAIL DATE	DELIVERY MODE
-----------	---------------

11/02/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/571,427

Applicant(s)

ABE ET AL.

Examiner

Timothy A. Brainard

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

While DE 10133945 is relied upon for the rejection, US 2005/0021201 is used as the translation of DE 10133945.

#### ***Information Disclosure Statement***

The information disclosure statement filed 3/26/2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. A translation of the document was not received and the relevance to the present invention is not described

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 14, 21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda (US 20030011509) in view of Lutter et al (US 2003/0201929). Honda teaches an object detection system comprising: a radar detection unit that detects an object using a radar, an image detection unit that detects an object using an image, and a collating unit that performs collation between a detection result of the

Art Unit: 3662

radar detection unit and a detection result of the image detection unit so as to determine whether an identical object is detected by the radar detection unit and the image detection unit (fig 8 and para 40); wherein the collating unit performs a first collation between an object detected by the radar detection unit in a present collation and an object; performs a second collation between an object detected by the image detection unit in a present collation and an object; and determines whether the radar detection unit and the image detection unit detect the identical object based on the first and the second collations (fig 8), the radar system being a millimeter-wave radar. Honda does not teach that an object has been determined as being detected by the radar detection unit and the image detection unit in a previous collation or it is determined that the identical object is detected by the radar detection unit and the image detection unit in the previous collation. Lutter teaches an object has been determined as being detected by the radar detection unit and the image detection unit in a previous collation and it is determined that the identical object is detected by the radar detection unit and the image detection unit in the previous collation (fig 5 and para 28-25). It would have been obvious to modify Honda to include the object has been determined as being detected by the radar detection unit and the image detection unit in a previous collation and it is determined that the identical object is detected by the radar detection unit and the image detection unit in the previous collation because it is one of multiple ways to determine the object with no new or unexpected results.

Claims 12-13, 15-16, 22-23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Lutter as applied to claims 11 and 21 above,

Art Unit: 3662

and further in view of Klotz et al (US 2005/0021201). Klotz teaches (claims 12 and 22) the collating unit performs a third collation between objects detected by the radar detection unit in the present detection, which are obtained by excluding the object determined as have been detected by the radar detection unit and the image detection unit, and objects detected by the image detection unit in the present detection, which are obtained by excluding the object determined as having been detected by the radar detection unit and the image detection unit such that it is determined whether the identical object is detected by the radar detection unit and the image detection unit and (claims 13 and 23) the collating unit determines all fusion objects in the present collation by adding the number of fusion objects determined based on the first and second collation to that of the fusion objects determined based on the third collation to determine all fusion objects in the present collation, and the collating unit determines all independent objects in the present collation by excluding the fusion objects from the objects detected by the radar detection unit or the image detection unit in the present detection (fig 3 and para 43–46). It would have been obvious to modify Honda in view of Lutter to include the collating unit performs a third collation between objects detected by the radar detection unit in the present detection, which are obtained by excluding the object determined as have been detected by the radar detection unit and the image detection unit, and objects detected by the image detection unit in the present detection, which are obtained by excluding the object determined as having been detected by the radar detection unit and the image detection unit such that it is determined whether the identical object is detected by the radar detection unit and the image detection unit and

Art Unit: 3662

the collating unit determines all fusion objects in the present collation by adding the number of fusion objects determined based on the first and second collation to that of the fusion objects determined based on the third collation to determine all fusion objects in the present collation, and the collating unit determines all independent objects in the present collation by excluding the fusion objects from the objects detected by the radar detection unit or the image detection unit in the present detection because it would give detail about every individual object in the scene. Honda teaches the radar system being a millimeter-wave radar.

Claims 17 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Lutter as applied to claim 11 and 21 above, and further in view of Hosaka et al (US 6181271). Hosaka teaches the image detection unit being a stereo camera (abs). It would have been obvious to modify Honda in view of Lutter to include the image detection unit being a stereo camera because it is one of multiple design choices with no new or unexpected results.

Claims 18-20 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Lutter in view of Klotz as applied to claim 12, 13, 14, 22, 23, and 24 above, and further in view of Hosaka et al (US 6181271). Hosaka teaches the image detection unit being a stereo camera (abs). It would have been obvious to modify Honda in view of Lutter to include the image detection unit being a stereo camera because it is one of multiple design choices with no new or unexpected results.

Art Unit: 3662

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy A. Brainard whose telephone number is (571) 272-2132. The examiner can normally be reached on Monday - Friday 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TAB



THOMAS H. TARCZA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600